# ATTACHMENT 8

# CLOSURE, POST-CLOSURE PLANS, AND COST ESTIMATES

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## [40 CFR Subpart G, 264.110 – 120; UAC R315-8-7; UAC R315-3-2.5(b)(13)]

This Closure Plan describes the activities that will be undertaken for the closure of the hazardous waste container storage unit (CSU) when Ashland facility ceases to operate or alters operations at its Clearfield, Utah, facility such that hazardous waste is no longer generated or no longer needs to be stored for greater than 90 days. General facility information is provided below:

| | |
|---|---|
| U.S. EPA Identification Number: | UTD048406144 |
| Owner's Name:<br>Address: | Ashland Inc.<br>5200 Blazer Parkway<br>Dublin, Ohio 43017 |
| Person Responsible for Maintenance of Closure Plan: | Michael Ritter, P.E.<br>Senior Staff Engineer<br>(614) 790-4277 |
| Facility Name:<br>Location: | Ashland Distribution<br>Freeport Center, Building 12<br>Clearfield, Utah 84016 |

## 1.0 CLOSURE PLANS
## [40 CFR 270.14(b)(13); UAC R315-3-2.5(b)(13)]

### 1.1 Closure Performance Standard
### [40 CFR 270.14(b)(13), 264.111]

The hazardous waste CSU will be closed in a manner that will:

- Minimize the need for further maintenance.
- Control, minimize, or eliminate the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.
- Comply with the closure requirements of the Utah Administrative Code and unit-specific closure requirements.

Copies of this Closure Plan and subsequent authorized amendments to the plan will be available at the facility until closure of these areas is completed and certified.

## 1.2 Time and Activities Required for Partial Closure and Final Closure Activities [40 CFR 270.14(b)(13), 264.112(b)(1) through 264.112(b)(7)]

The hazardous waste CSU is expected to remain operational during the life of the Ashland Clearfield facility. No partial closure activities are planned for this facility. If an unanticipated partial closure is necessary, this Closure Plan will be amended as discussed in 40 CFR 264.112(c).

## 1.3 Maximum Waste Inventory [40 CFR 270.14(b)(13), 264.112(b)(3)]

The maximum inventory of hazardous wastes that could be in storage at any time during the life of this facility is in the hazardous waste container storage areas is 32,560 gallons (which is equivalent to 592, 55-gallon drums). Table 1 of this section contains a list of all hazardous waste codes the facility is permitted to store.

## 1.4 Schedule for Closure [40 CFR 270.14(b)(13), 264.112(b)(6)]

A time schedule for the closure of the hazardous waste storage areas is shown in Table 2 of this section. Table 2 represents the maximum time allotted for closure activities at the Ashland Clearfield facility.

### 1.4.1 Time Allowed for Closure [40 CFR 270.14(b)(13), 264.112(b)(2), 264.113(a) and (b)]

Table 2 shows that:

- All closure activities will be completed within 180 days from the receipt of the final volume of waste.
- All hazardous wastes will be removed off-site within 90 days from the receipt of the final volume of waste.

### 1.4.2 Extension for Closure Time [40 CFR 270.14(b)(13), 264.113(a) and (b)]

If closure activities are expected to extend beyond 180 days after receiving the final volume of hazardous waste, a petition for a schedule for closure that justifies that a longer period of closure time is required and will be submitted. However, it is not anticipated that closure will extend beyond 180 days after the receipt of the final volume of hazardous waste.

## 1.5 Closure Procedures [40 CFR 270.14(b)(13), 264.112, 264.114]

### 1.5.1 Inventory Removal [40 CFR 270.14(b)(13), 264.112(b)(3)]

Within 90 days of receiving the final volume of hazardous waste, the entire inventory will be transported by a licensed hazardous waste transporter to a RCRA licensed, off-site, TSDF. Containers will be properly manifested, packaged, and labeled for shipment according DOT and EPA regulations. Prior to shipment, containers will undergo an additional inspection for leakage. Leaking containers will be placed in overpack drums with absorbent. Any equipment or clothing that contacts the hazardous waste will be decontaminated or disposed of as a hazardous waste.

### 1.5.2 Disposal or Decontamination of Equipment, Structure, and Soils [40 CFR 270.14(b)(13), 264.112(b)(4), 264.114]

The facility CSU covers approximately 2,300 square feet (Storage areas 1, 2, and 3: 1,824 square feet; Storage Area 4: 500 square feet). The CSU is curbed and provides four separate storage areas within the CSU, allowing segregation of incompatible wastes. The CSU is designed to provide storage for a maximum waste volume of 32,560 gallons, which is equivalent to 592, 55-gallon drums. Containers are stacked no more than two high. The approximately six-inch thick concrete base is of sufficient thickness and material to prevent container spills and leaks from migrating out of the storage areas. The base is free of cracks and gaps, and is coated so that it is sufficiently impervious to contained materials until such time as the accumulated material is detected and removed.

Closure of the CSU will be completed within 180 days after receiving the final volume of hazardous waste. The need for a time extension is not anticipated at this time. Disposal and decontamination activities will include:

- The entire surface areas of the CSU and any equipment used in the transport and handling of hazardous waste or equipment used during closure activities will be steam cleaned or rinsed using a high-pressure water wash within the storage area containment system. The solution to be used during steam cleaning or pressure washing will be decided upon at the time of decontamination. Water can be used if visible surface contamination is minimal. In areas where surface contamination is high, a heavy-duty cleaning solution may be required followed by steam cleaning. The surfaces of the CSU will be scrubbed with the heavy-duty cleaning solution using an industrial floor cleaner. A plastic sheet, or other moisture barrier, will be

placed around the outside perimeter of the storage areas to protect surrounding surfaces. This sheeting will be characterized and managed appropriately following the decontamination of the storage areas. Following steam cleaning and scrubbing activities, the entire surface area of the CSU will be triple rinsed with potable water. The floors will be thoroughly wetted over the entire surface area. Then using a dry vacuum, new floor mops, and squeegees, the surface water will be removed, working from the periphery to the center. Once the first rinse is removed, this procedure will be repeated for the second and third rinses.

- Wash and rinse water will be accumulated into containers. This water will be characterized (i.e., analyzed for corrosivity and the toxicity characteristic leaching procedure [TCLP]) and managed accordingly. If determined to be hazardous, it will be managed in the same manner as the final volume of hazardous waste. An estimated 495 gallons maximum will be generated during steam cleaning, rinsing, and scrubbing activities.

- A separate rinse sample will be collected from each storage bay from the third rinse. Each sample will be analyzed for TCLP analyses for RCRA metals, cyanide, pH, TOX, and TOC analyses. Sampling methods will be in accordance with procedures established in SW-846 *(EPA Test Methods for Evaluating Solid Waste, November 1986, and as updated).*

- A blank sample of the potable water used for rinsing, an equipment blank, and a trip blank will also be collected. They will only be analyzed for the entire suite of analyses if rinse sample results are questionable.

- Soil at the facility is not expected to be contaminated by the container storage of hazardous wastes. However, if evidence of possible soil contamination is present, soil sampling will be conducted.

Analytical Parameters and Test Methods

Samples collected during closure activities will be analyzed for the constituents of the wastes managed at the facility, in accordance with the applicable SW-846 methods or other approved methods. A certified off-site analytical laboratory will analyze the samples.

The analytical laboratory chosen for these analyses will be required to comply with SW-846 Quality Assurance/Quality Control (QA/QC) procedures for each analytical procedure performed.

Clean Standards

The waste storage areas will be considered clean when the following standards are met by the rinseate samples from the third rinse:

(i) "Non-detect" based on the method detection limit (MDL) for the analytical test method used for each constituent. If a constituent concentration in the rinse water sample is above the MDL, the performance standard will still be met if the constituent concentration is less than or equal to that constituent's concentration in the equipment blank or field blank sample.

(ii) Public drinking water maximum contaminant levels (MCLs) for hazardous waste constituents, as promulgated in 40 CFR 141.11 for inorganics and 40 CFR 141.12 for organics.

(iii) If no MCL is available, the maximum contaminant level goal (MCLG), as promulgated in 40 CFR 141.150, will be used.

(iv) If no MCL or MCLG is available, then a level of one milligram per liter (mg/L) will be used.

If the MCL or MCLG is less than the constituent's analytical detection limit using methods found in SW-846, then the SW-846 analytical detection limit will be used as the clean standard. The comparison to MCLs is based on the rinsate sample minus equipment blank (background).

It is expected that one wash and triple rinse cycle will be adequate to completely decontaminate the storage areas. However, should the concentrations of constituents in the rinsate samples exceed the above standards, then Ashland will complete a second wash and triple rinse cycle. The rinsate generated from the second cycle will be analyzed for the constituents that exceeded the standards in the first cycle. In the unlikely event that the concentrations of constituents in the rinseate samples exceed the standards after the second wash and rinse cycle, then Ashland will discuss the analytical results and appropriate actions to be taken with the Utah DEQ.

Utah DEQ Notification Before Closure

As required by UAC R315 (40 CFR 264.112(d)), the Closure Plan will be submitted to the Utah DEQ at least 45 days prior to the date on which closure of the regulated unit is expected to begin. The date when closure is expected

to begin must be no later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous waste, or if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous waste, no later than 1 year after the date on which the unit received the most recent volume of hazardous waste. A 10-day advance notice of closure will be sent to the Utah DEQ. The Utah DEQ will provide the Ashland and the affected public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications to the plan no later than 30 days from the date of notice. The Utah DEQ will modify, approve, or disapprove of the plan within 90 days of receipt.

Certification of Closure

As required by UAC R315 (40 CFR 264.115), within 60 days of completion of closure of the regulated unit, a certification that the HWMU or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan will be submitted to the Utah DEQ. The certification will be signed by the owner or operator and by an independent registered professional engineer. Table 2 of this section includes a schedule for closure, although an actual date of closure has not been determined at this time.

### 1.5.3 Closure of Disposal Units/Contingent Closures
**[40 CFR 270.14(b)(13)]**

Hazardous wastes are not managed in disposal units at this facility.

### 1.5.4 Closure of Containers
**[40 CFR 270.14(b)(13), 264.178, 264.112(b)(3), 270.14(b)(13)]**

Hazardous waste removal and disposal; container decontamination and disposal; site decontamination and disposal including linings, soil, and washes; and maximum inventory are addressed in Sections 1.5.1 – Inventory Removal and 1.5.2 – Disposal or Decontamination of Equipment, Structure, and Soils.

### 1.5.5 Closure of Tanks
**[40 CFR 270.14(b)(13); 264.197; 264.112(b)(3)]**

The former tank closure activities are summarized in the tank closure certification report submitted to the State of Utah, dated April 23, 1998.

### 1.5.6 Closure of Waste Piles
**[40 CFR 270.14(b)(13), 270.18(h), 264.258]**

Hazardous wastes are not managed in waste piles at this facility.

### 1.5.7 Closure of Surface Impoundments
**[40 CFR 270.14(b)(13); 270.17(f); 264.228(a)(1), (2), and (b)]**

Hazardous wastes are not managed in surface impoundments at this facility.

### 1.5.8 Closure of Incinerators
**[40 CFR 270.14(b)(13), 264.351]**

Hazardous wastes are not managed in incinerators at this facility.

### 1.5.9 Closure of Landfills
**[40 CFR 270.14(b)(13), 270.21(e), 264.310(a)]**

Hazardous wastes are not managed in landfills at this facility.

### 1.5.10 Closure of Land Treatment Facilities
**[40 CFR 270.14(b)(13), 264.280(a), 270.20(f)]**

This facility does not conduct land treatment of hazardous waste.

### 1.5.11 Closure of Miscellaneous Units
**[40 CFR 270.14(b)(13), 270.14(b)(13), 270.23(a)(2)**

Hazardous wastes are not managed in miscellaneous units at this facility.

### 1.5.12 Closure of Boilers and Industrial Furnaces
**[40 CFR 270.14(b)(13), 266.102(a)(2)(vii)]**

Hazardous wastes are not managed in boilers or industrial furnaces at this facility.

### 1.5.13 Closure of Containment Buildings [40 CFR 270.14(b)(13), 264.1102]

Hazardous wastes are not managed in containment buildings at this facility.

## 2.0 CLOSURE COST ESTIMATE [40 CFR 270.14(b)(15), 264.142]

The closure cost estimate is shown in Table 3. Total closure cost is estimated to be approximately **$305,873**.

## 3.0 POST-CLOSURE PLANS [40 CFR 270.14(b)(13)]

Post-Closure care requirements do not apply to the CSU because these units are not hazardous waste treatment and disposal units or tank systems where contaminated soil is expected to remain in-place.

## 4.0 POST-CLOSURE COST ESTIMATE

Post-Closure Cost Estimate requirements do not apply to the CSU because these units are not hazardous waste treatment and disposal units or tank systems where contaminated soil is expected to remain in-place.

## 5.0 NOTICES REQUIRED FOR DISPOSAL FACILITIES [40 CFR 270.14(b)(13)]

Because the CSU is not a disposal unit and no hazardous wastes are expected to remain after closure, notification to the local authority with jurisdiction over land use and a notice in the deed regarding the use of this property for the management of hazardous waste will not be required.

# TABLE 1

# RCRA HAZARDOUS WASTE STORAGE

# Table 1
# RCRA HAZARDOUS WASTE STORAGE

## Ashland Distribution
## Clearfield, Utah

Containerized hazardous wastes that are collected at the customer's location and have been qualified for acceptance by a permitted treatment, storage, disposal, or reclamation facility.

The following wastes may be stored:

| D Codes | P Codes |
|---|---|
| D001-D043 (except D003) | P029 |
| **F Codes** | **U Codes** |
| F001–F009, F019, F034, F035, F037, F038 | U001-U004, U008, U012, U019, U023, U028, U031, U032, U039, U043, U044, U051-U053, U055-U057, U069-U072, U075-U079, U080, U083, U088, U090, U092, U102, U103, U107, U108, U110, U112, U117, U121, U122, U123, U125, U140, U147, U154, U159, U161, U165, U171, U199, U190, U194, U196, U210, U213, U219, U220, U223, U225, U226, U228, U239, U359 |
| **K Codes** | |
| K001, K048-K052, K086 | |

# TABLE 2

# SCHEDULE FOR CLOSURE

**Table 2**
**Anticipated Closure Schedule**

| Activity | Number of Days | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **10** | **20** | **30** | **40** | **50** | **60** | **70** | **80** | **90** | **100** | **110** | **120** | **130** | **140** | **150** | **160** | **170** | **180** |
| Notification and Closure Plan submitted to Utah DEQ **180 days** prior to anticipated date of closure | | | | | | | | | | | | | | | | | | |
| Utah DEQ comments on the Ashland Clearfield facility's Closure Plan | | | | | | | | | | | | | | | | | | |
| Closure of Hazardous Waste Container Storage Areas: | | | | | | | | | | | | | | | | | | |
| 1) Removal of final waste inventory | | | | | | | | | | | | | | | | | | |
| 2) Decontamination of storage areas | | | | | | | | | | | | | | | | | | |
| 3) Removal and disposal of decontamination materials | | | | | | | | | | | | | | | | | | |
| Soil sampling and removal of contaminated soil | **Not anticipated to be necessary** | | | | | | | | | | | | | | | | | |
| Certification of closure and submittal to the Utah DEQ | | | | | | | | | | | | | | | | | | |

# TABLE 3

# CLOSURE COST ESTIMATE

# Table 3
# UNIT CLOSURE COST ESTIMATE

## Ashland Distribution
## Clearfield, Utah

| Task | |
|---|---|
| Task 1: Hazardous Waste Container Storage Areas – Removal and Disposal of Waste Inventory and Decontamination: | |
| Drum sampling, characterization, removal, transportation, and disposal of waste inventory<br>(Maximum 592 drums x $350 per drum | $207,200 |
| Storage Area Decontamination<br>Rental of steam cleaner (3 days x $75 per day) | $225 |
| Sample Collection<br>Labor (24 hours x $25 per hour) | $600 |
| Sample Analysis<br>SW-846 Methods (4 samples, one for each of the four bays)[a] | $2,000 |
| Collection and Disposal of Decontamination Generated Wastes:<br>Rinsate and solids (9 drums x $350 per drum) | $3,150 |
| **SUBTOTAL for Task 1:** | **$213,175** |
| Task 2: Closure Certification<br>Labor (24 hours x $75 per hour)<br>Expenses (3 days x $75 per day)<br>Mileage (300 miles x $0.29 per mile) | <br>$1,800<br>$225<br>$87 |
| **SUBTOTAL for Task 2:** | **$2,112** |
| Other Costs: | |
| Investigation of SWMUs | $5,000 |
| Possible remediation of SWMUs | $15,000 |
| **SUBTOTAL (Other Costs)** | **$20,000** |

| | |
|---|---|
| Subtotal (Direct and Other) | $235,287 |
| Contingency for Soil Sampling (15%)[b] | $35,293 |
| Contingency (15%) | $35,293 |
| **TOTAL PERMITTED FACILITY CLOSURE COST** (all unit costs combined) | **$305,873 (2007)** |

[a]INCLUDES RINSEATE AND QA/QC SAMPLING.
[b]NO SOIL CONTAMINATION IS ANTICIPATED AS A RESULT OF CONTAINER STORAGE AND HANDLING. NEVERTHELESS, A 15% CONTINGENCY HAS BEEN ADDED FOR SAMPLING, ANALYSIS, REMOVAL, AND DISPOSAL OF CONTAMINATED SOIL.